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MOOCs[1] and the Rise of Online Legal Education

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Introduction

Whereas the capacity to grow and distribute food defined the agrarian economy, and the capacity to manufacture and distribute goods defined the industrial economy, the capacity to create and apply knowledge defines the post-industrial digital economy. In this context, sustainable prosperity depends on a society's capacity to create and apply knowledge to solve problems.[2]

Universities continually look at quality assurance processes and the use of new technologies to increase participation and improve student outcomes. The combination of traditional practice associated with aging legal academics, the demands of digital natives and the ability of new technologies to disrupt accepted practices suggests that new teaching modes are needed.[3] The situation is no starker than that presented by the advent of MOOCs—Massive Open Online Courses.

While it is not suggested that legal education in general will be provided through open online courses with participants numbering in the hundreds of thousands, these courses provide an opportunity to explore how universities, law schools and academic staff may change the way they teach and relate

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1. MOOCs are massive open online courses. *See e.g.* www.coursera.org; www.edx.org/; www.khanacademy.org/; www.academicroom.com; www.udacity.com.

2. Alexander McAuley, Bonnie Stewart, George Siemens & Dave Cormier, The MOOC Model for Digital Practice, Dave's Educational Blog 6 (2010), *available at* http://davecormier.com/edblog/wp-content/uploads/MOOC_Final.pdf.

3. A person who was has grown up with digital technologies from an early age may be categorized as a digital native. Marc Prensky coined the term in Marc Prensky, Digital Natives, Digital Immigrants, *in* On the Horizon (MCB Univ. Press 2001), *available at* http://www.marcprensky.com/writing/prensky%20-%20digital%20natives,%20digital%20immigrants%20-%20part1.pdf.

to students. Similarly the learning relationships between students also may change as a consequence of the new paradigm.

The adoption of broad teaching standards as part of quality assurance processes will result in aspects of teaching practice, curriculum development and the student learning environment becoming increasingly more public and transparent. It is likely new teaching models will need to both inform and conform to any framework of teaching standards adopted across the sector.

Initially, beyond political and social reasons, MOOCs may not seem an attractive option, especially to members of law teaching staffs who face ever increasing demands on their time, not least of which is research. However, there are many reasons why those engaged in legal education may want to develop these online courses across the higher education sector including:

- *Marketing to potential future students*. MOOCs increase exposure to potential students because the resources of the courses are open to all who may want to register. There is no requirement to complete assessment tasks unless the student is enrolled in an accredited program associated with the online course.
- *Community engagement and outreach programs*. Such programs often are designed to increase participation in higher education, especially for designated equity groups. MOOCs may provide potential students with greater exposure to legal education. Rather than just being a simple marketing strategy, the support provided through these online classes may include strategies targeting groups of students with different motivations for participation.
- *Reputation building*. Successful MOOCs may build individual, school and university reputations for providing quality legal advice and criticism within supportive and effective learning environments that foster the development of ongoing professional networks.
- *Alumni development*. For alumni, MOOCs provide a way of mentoring students and maintaining professional connections with their university and its teaching staff. It can be an avenue for giving back.
- *Interaction with professional continuing legal education*. The online concept suits continuing education since learning resources may be provided in a setting in which participants assemble professional networks to provide a forum for discussion of contemporary issues in the law. There is potential for a credentialed online course to provide mandatory continuing legal education points and cross-credit for higher legal qualifications.
- *Networking and profile building*. A MOOC provides participants with an opportunity to build extensive professional networks and specialties. Through the quality of their contributions to the professional network, participants can build a profile of their own work and that of their organization.

- *Developing foundational skills*. The open resources available through the online course, built on Web 3.0 tools, provide an opportunity for participants to develop literacies and skills fundamental to success in accredited legal programs. Web 3.0, or the semantic web[4] as it is also known, moves from current unstructured or partially structured content to automated location, sharing and combination of vast quantities of otherwise inaccessible data. Participants can use the learning resources repeatedly until they demonstrate the competencies underlying success in the conventional legal curriculum.
- *Try before you buy*. MOOCs provide potential students with an opportunity to experience a course about the law before paying for and attending an accredited course. Reputations will be on the line as the quality of teaching materials and staff expertise are plain for all to see.
- *Internationalization*. MOOCs have the potential to establish links between law schools nationally and internationally. Imagine online courses featuring international experts from diverse cultures.
- *Promoting access to justice*. Online courses on certain topics may encourage access to justice by providing skills and knowledge that otherwise could only be obtained from a lawyer for a fee.
- *Demystifying the law*. MOOCs' ability to reach a wide audience combined with topics in plain English will help expose laymen to the law, potentially peeling back millennia of legal jargon and practice. The potential for enhancing access to justice should not be ignored.

There is little doubt that modern learning models are challenging for both student and teacher.[5] But this question remains: How will law schools adapt to these changes?

Defining a Massive Open Online Course

MOOCs are online, free and offer learning materials that may be modified, reused and redistributed to reach massive communities.

Ken Masters[6] argues that MOOCs represent Stage 4 in the development of online learning. Stage 1 was when academics used file servers to share learning resources that included such documents as learning guides, lecture notes and transcripts.

4. The notion of the semantic web, which comes from Tim Berners-Lee, credited as the inventor of the World Wide Web, suggests that the current unstructured or semi-structured nature of the Internet can become structured and much more accessible and useful through common data formats.

5. *See* Gordon Lockhart, #Change11: MOOCs, Education and the Infinite Hotel, Connection not Content, May 23, 2012, *available at* http://gbl55.wordpress.com/2012/05/23/moocs-education-and-the-infinite-hotel/.

6. Ken Masters, A Brief Guide To Understanding MOOCs (Internet Science Pub. 2011), *available at* http://www.ispub.com/journal/the-internet-journal-of-medical-education/volume-1-number-2/a-brief-guide-to-understanding-moocs.html.

Stage 2 represented the beginnings of the use of learning management systems[7] or virtual learning environments, with the systems used to distribute learning resources. Chat rooms, discussion forums, wikis, online tests and grade books existed but were not used extensively.

Stage 3 initiated the era of learning communities and collaborative learning with a subsequent increase in the use of online communication, collaborative work and the use of online assessment. Online grade books are used in management classes. Links to other Web 2.0 tools are provided within learning management systems. In Stage 3, pedagogy changes as there is a move from a preoccupation with amount and delivery of content to a focus on life-long learning and the skills students need in a rapidly changing profession and world.

Stage 4 represents a significant shift in which the learning management system is reduced to one node within a larger decentralized learning network. A network is a collection of computers enabling communication of resources and information. Larger numbers of people may register for the course but elect to use personal blogs,[8] personal portfolios, websites, tweets,[9] uploads into video hosting sites (e.g., YouTube), networking sites and virtual worlds.[10] The system is used primarily for management tasks and to host discussion forums. Automatic systems using tags[11] or RSS feed readers are used to aggregate and distribute contributions daily via email to those registered for a course. In Stage 4 the "content" is assembled from the contributions of participants more than from a university's learning management system.

Such open and accessible online courses are now discussed publicly worldwide and capture the imagination.[12] The characteristics of a MOOC include:[13]

7. A learning management system is software designed for the administration, documentation, tracking, reporting and delivery of online education courses.

8. A blog is a discussion or information website consisting of reverse chronological text, image and link entries, known as posts.

9. A tweet is a text-based message of up to 140 characters sent by users of Twitter, which is an online social networking (or micro blogging) service. *See* www.twitter.com.

10. A virtual world is a computer-based simulated environment in which a community of users can interact with one another. e.g. www.secondlife.com.

11. A tag is an index keyword or term assigned to a piece of information. Tags describe items and enable them to be found.

12. *See* Sean Gallagher & Geoffrey Garrett, Elite US universities offer free web courses, The Australian, June 6, 2012, *available at* http://www.theaustralian.com.au/higher-education/opinion/elite-us-universities-offer-free-web-courses/story-e6frgcko-1226385261460; Simon Marginson, Free, branded online programs could be the best of all worlds, The Australian, June 6, 2012, *available at* http://www.theaustralian.com.au/higher-education/free-branded-online-programs-could-be-the-best-of-all-worlds/story-e6frgcjx-1226385345212.

13. *See* Stephen Carson & Jan Schmidt, Online higher education for the masses, University World News, May 27, 2012, *available at*http://www.universityworldnews.com/article.php?story=20120525135513146#.T8H2dTU44z0.mailto; *see also* Tamar Lewin, Instruction for

- Online courses consisting of open content[14] video lectures and slides with short online quizzes.
- Informal question and answer systems enabling peer-to-peer interactions as well as interactions between learners with differing levels of experience.
- Learning analytics that capture user activity and quiz results, potentially supplemented by supervised exams.[15]
- Potential credentials and awards recognizing successful completion of courses or modules within courses.
- Links to individual and comparative learning portfolios that employers can examine.
- Removal of constraints such as course offerings in defined time frames allowing students to look through all content to support their current needs.
- Development of peer-to-peer networks linking students, staff and alumni with attendant benefits to each group in the ebb and flow of lifelong learning opportunities.

Dave Cormier describes a MOOC as a course that is open, participatory, distributed and supportive of life-long networked learning.[16] Let's consider each element of Cormier's analysis:

Masses Knocks Down Campus Walls, N.Y. Times, Mar. 5, 2012, at A11, *available at* http://www.nytimes.com/2012/03/05/education/moocs-large-courses-open-to-all-topple-campus-walls.html?_r=1&pagewanted=all.

14. Open content is similar to open access. Open content allows the additional right to modify open access information. Usage rights are often governed by creative commons licenses which set the same baseline user rights and restrictions for all users of a particular license with respect to attribution, commercial use, derivative works and share alike provisions. *See* www.creativecommons.org/.

15. *See generally* The 1st International Conference on Learning Analytics and Knowledge, LAK 2011, July 22, 2010, *available at* https://tekri.athabascau.ca/analytics/; Learning Analytics and Knowledge, LAK 2012, *available at* http://lak12.sites.olt.ubc.ca/. Information on LAK 2013 occurred in April 8-12, 2013 *available at* http://lakconference2013.wordpress.com/.

16. Dave Cormier, What is a MOOC?, YouTube, Dec. 8, 2010, *available at* http://www.youtube.com/watch?v=eW3gMGqcZQc.

Table 1. Cormier's Analysis

Course	Traditional courses have a start and end date, facilitators, course materials, participants, assessment and a way to connect and collaborate while developing digital skills. The traditional course is structured as a way of engaging with the learning process and learning what it means to be a student. In contrast, a MOOC is neither a school nor just an online course. As Cormier correctly observes, most importantly a MOOC is an "event." People who care about a topic can get together and work and talk about it in a structured way with other interested people.
Open	In a MOOC, all the work gets done in areas accessible for people to read, reflect and make comments. People can take the course without paying for it. They may pay to obtain credit through an institution but they are not paying to participate in the course. Work done in the course is shared between all the people taking it. The materials put together by the facilitator and the work done by the participants is all negotiated in the open. You can keep your work and everybody else can learn from it. The materials developed in association with the MOOC would typically be open sourced.[17]
Participatory	Each participant becomes part of the course by engaging with the work of others and sharing their own thoughts. Generally, people are not asked to complete specific assignments. Rather they engage with learning materials/resources and use each other's materials, whether created and contributed by the individual or found on the web. This may give rise to issues of managing citations and attributions and avoiding plagiarism. Significant outcomes are the network connections made during the course in relation to ideas and between participants.
Distributed	There is no central system. Blog posts, discussion posts, video responses, articles, tweets and tags all knit together to create a networked course. Web tools are used all over the Internet in different pockets and clusters. There is no right way to do the course, no single path through the course. This allows for new ideas to develop and different ideas to coexist. The concept of the semantic web fits neatly with the concept of distribution central to the success of a MOOC. A distributed knowledge base is built and shared on the Internet by the participants.

17. Open source is a philosophy that promotes free distribution and access to a software product and its underlying source code. It promotes collaborative development of software and resource sharing.

Life-long networked learning	Exponents of MOOCs advocate that such courses represent a step on the road to lifelong learning. They argue that a MOOC develops independence, encourages working in one's own space and assists in creating authentic networks that participants can easily maintain after the course is completed. A MOOC can promote the creation of the type of network that lifelong learning is all about. The course is just the beginning. News that a MOOC will be offered usually spreads through online networks.[18] People who have innovative skills and reputations on a topic collaborate by offering a MOOC. Anyone can join.

According to Dave Cormier, "[Y]ou can choose what you do, how you participate and only you can tell . . . if you have been successful. Just like real life."[19]

A real life example of a MOOC can be seen with the Massachusetts Institute of Technology OpenCourseWare project, which is now extending to include open online courses by developing a software product called MITx that will be able to do the following:

- Organize and present course material to enable students to learn at their own pace.
- Feature interactivity, online laboratories and student-to-student communication.
- Allow for the individual assessment of any student's work and allow students who demonstrate their mastery of subjects to earn a certificate of completion awarded by MITx.
- Operate on an open-source, scalable[20] software infrastructure to permit continuous improvement and ready availability to other educational institutions.

The move expands MIT's OpenCourseWare project, allowing students to earn certificates and demonstrate mastery of subjects. OpenCourseWare contained nearly all of MIT's 2,100 undergraduate and graduate course materials for the past ten years. The school says nearly 100 million people have used the material.[21]

18. McAuley, et al., *supra* note 2, at 11.

19. Cormier, *supra* note 16.

20. Scalable means that a solution can accommodate an ever increasing numbers of students.

21. MIT Announces MITx, Expanding its OpenCourseWare Project, Wiredacademic, *available at* http://www.wiredacademic.com/2011/12/mit-announces-mitx-expanding-its-opencourseware-project/.

MOOC Ecology

The landscape of MOOCs is changing rapidly; so much so that any list of available courses would quickly be obsolete and unlikely to adequately capture the scope of courses. MOOCs will evolve to include a range of different approaches and techniques as course designs mature. For example, such courses may range in flexibility and timing from those undertaken at any time (typically with formative assessment designed for learning) to those geared to defined enrollment periods with summative assessment designed for credentials.

It is not surprising to see the beginnings of MOOCs in topics centered on technology. Internet technology is changing the way we construct knowledge and interact with each other. Original MOOC topics included connectivism and connective knowledge, personal learning environments and network knowledge,[22] digital storytelling,[23] machine learning and databases.

The growth of open learning resources and organizations such as Coursera[24] and Udacity[25] increasingly has led to the availability of free online courses. Udacity provides access to computer science related topics. Coursera is now providing a much greater range of topics for study online. Recently the University of Edinburgh joined Coursera[26] to deliver online courses as MOOCs following universities such as Stanford, Georgia Tech and MIT.[27] The University of Queensland recently announced 12 courses to be delivered as MOOCs[28] as has the University of Melbourne.[29] The floodgates are now open. Universities are scrambling to have a MOOC presence.

At the time of this writing, law was underrepresented in MOOC offerings. Coursera does advertise "English Common Law: An Introduction" offered by

22. *See* Personal Learning Environments Networks and Knowledge 2010, *available at* http://connect.downes.ca/.

23. *See* Jim Groom, DS106: The Open Online Community, Kickstarter, March 29, 2012, *available at* http://www.kickstarter.com/projects/jimgroom/ds106-the-open-online-community-of-digital-storyte?ref=live.

24. *See* Coursera, *available at* https://www.coursera.org/.

25. *See* Udacity, *available at* http://www.udacity.com/.

26. *See* MOOCs at Edinburgh | Online Programmes, University of Edinburgh, July 18, 2012, *available at* http://www.ed.ac.uk/studying/postgraduate/online-distance-learning/programmes/mooc-edinburgh (comparing university online postgraduate programs and MOOCs).

27. *See* Heard: MOOCs Growing From Stanford to Georgia Tech, Wiredacademic, *available at* http://www.wiredacademic.com/2012/03/heard-moocs-growing-from-stanford-to-georgia-tech-to-mit-to-udacity-and-udemy/.

28. *See* Charis Palmer, UQ joins MOOCs Movement, The Conversation, Sept. 24, 2012, *available at* http://theconversation.edu.au/uq-joins-moocs-movement-9770.

29. *See* Charis Palmer, Melbourne Uni Signs on to Coursera, The Conversation, Sept. 20, 2012, *available at* http://theconversation.edu.au/melbourne-uni-signs-on-to-coursera-with-others-expected-to-follow-9720.

Dame Hazel Genn at the University of London.[30] The course, lasting six weeks, "will be delivered via video and audio lectures along with online formative assessment. . . . Students will also have the opportunity to undertake legal research tasks to gain additional skills."[31] Initial experiments with MOOCs are likely to rely on existing materials designed for traditional "sage on the stage" delivery. This situation will change quickly as universities experiment with courses that lend themselves to the use of more open learning resources and more independent learning with the potential to attract larger numbers of students.

In Australia, the accredited law discipline at Central Queensland University is moving its entire law program onto iTunesU in an open access[32] model. Lecture podcasts, study guides and course notes (iBooks) will be publicly available. Discussion threads and summative assessment will be available on the learning management system for enrolled students with username and password access. Potential students will be able to evaluate course materials before enrolling. Alumni and those with an interest in the subject matter will be able to view current course content. The materials are expected to benefit legal studies students in secondary education, practitioners wanting a refresher course, students wanting to keep up to date—and anyone with an interest in the law. Wikis[33] may be set up for participants to suggest improvements in the materials or content that might be added. The program is seen as a community resource and as a way for the law program to engage with the broader community it serves.

Beyond traditional university courses, there is likely to be interest in using MOOCs to market courses to potential students and to increase student success rates by providing additional learning resources.[34] It will be interesting to see whether the development of learning analytics and online learning environments will be more conducive to student success, especially as online university brokers seek different models of teaching and student support.

Open Source, Open Access or Something in Between

In this article, we distinguish between "open source" and "open access" learning resources. MOOCs assume most learning resources are developed by participants while solving the problems of a group formed for a common purpose. These resources can evolve as people work together throughout the course. Consequently, knowledge is said to be created within a distributed

30. *See* English Common Law: Structure and Principles | Coursera, Coursera, *available at* https://www.coursera.org/course/engcomlaw.

31. *Id.*

32. Open access means providing unrestricted Internet access to information.

33. A wiki is a website enabling users to add, delete or modify content using a web browser, e.g., www.wikipedia.com.

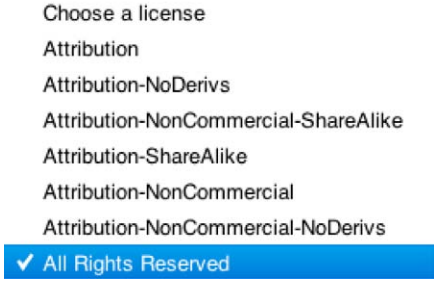
34. *See* the CQ University site on iTunesU where the entire accredited law program content consisting of 26 law courses is publicly available free of charge.

community with a common interest. In such a learning setting, learning resources are "open sourced" in that they are available to all and, more importantly, may be edited, extended and used by any participant.

As universities move to a more open use of learning resources, it is more likely that in the short term learning resources will be "open access." Learning resources are made available to the public through learning management systems, on university websites, in national databases[35] and/or through providers such as iTunesU. However, often these learning resources may be used but not changed. In the first instance, these resources may be seen more as a marketing strategy than as a new teaching and learning environment. iTunes readily supports the dissemination of lecture videos. These still emphasize the "sage on the stage" approach and transmission models of learning. However, MOOCs and online courses in general require more independent and active learning strategies. More open learning resources support the move away from standard campus-based teaching delivered online.

When creating publications such as iBooks, teaching staff and the university have options available that would allow different levels of access by participants in a MOOC. For example, when developing an iBook in the iBook Author application, the writer/designer can choose among these options in regard to the license that will be applied:

Figure 1. iBook Author License Options



Ultimately, how editable the learning resources become is a decision related to the software chosen and the willingness of the author (and university) to allow "its intellectual property" to become part of the resources of others. Many academics may elect to apply a creative commons license to their work.[36] However, academic book publishers, seeing erosion of their income, seem unlikely to adopt such an approach.

35. For example, in Australia, some resources could become available through databases provided through the Office for Learning and Teaching. *See* Australian Government Office for Learning and Teaching, http://www.olt.gov.au/.

36. *See* About the Licenses–Creative Commons, Creative Commons, *available at* http://creativecommons.org/licenses/ (describing available creative common licenses).

We are likely to see a transition as law schools move existing resources online and create more collaborative networked knowledge constructs with learning outcomes leading to credentials. There is significant pedagogical and political change afoot.

Learning in a MOOC-connected Environment

In videos provided with their report,[37] McAuley and his colleagues[38] suggest reasons for attending a MOOC include having an interest in the course topic, wanting to use the course to finish a project, seeking credit and/or wishing to create a learning network.[39] They further[40] suggest the following steps to help students be successful in a MOOC:

37. In keeping with the theme of digital practice of the paper.

38. *See* McAuley, et al., *supra* note 2, at 6 ("[T]his framework provides access to large numbers of people who might otherwise be excluded for reasons ranging from time, to geographic location, to formal prerequisites, to financial hardship.").

39. The idea lends itself to developing a professional network using MOOCs for continuing education.

40. McAuley, et al., *supra* note 2.

Table 2. McAuley et al. Steps to MOOC Success[41]

Orient	Identify the materials, links that are used every week and times for live sessions. These resources need to be bookmarked and readily available. MOOCs are paced like traditional classes. Release of materials may be scheduled. Live sessions are on a timetable, although they also may be recorded.
Declare	MOOCs may include blogs, discussion forums and wikis. Students need communication tools to show others in the course their thoughts. The MOOC will have some way of gathering the postings (and thoughts) of the participants.[42] Students may set up their own blogs, etc., as long as people can access them.[43]
Network	Students must look to information provided by others and build connections with fellow participants. They should look at the materials, other people's posts, etc., and then respond by building a network and knowledge of the course. Again, how much the student learns depends on his or her connections and communications in the learning network.[44]
Cluster	During the course, people with common interests will increasingly respond to other people with a shared interest. They should find people who are interested in similar topics and respond to their work. This strengthens connections in a group. At some point a learning community consolidates and may last beyond the life of the course.
Focus	The challenge is to remain focused. Participants must be clear on why they are taking the course. Some may want eventual credit. In this case, they are likely to focus more on learning outcomes and assessment provided with the course. Other students need to establish their own reasons for taking the course and, while not necessarily expressing them as learning outcomes, will need to judge their success accordingly. This group of students should post entries on the class blog focused on their interests, use their network to clarify that focus and possibly design and complete a project embedding it over the rest of the course.

41. The contents of Table 2 represent our summary and additional comments on Dave Cormier, Success in a MOOC, *available at* http://www.youtube.com/watch?v=r8avYQ5ZqMo.

42. Such as a "tag," a way of identifying the user.

43. Students may set up their own RSS page and/or post it to Twitter.

44. Importantly, omitted from the MOOC is individual feedback to the student by the facilitator or teacher. This may happen through feedback to the class but, because of the numbers, emphasis is placed on one-to-many communication and the quality of learning resources.

"MOOCs are open to different ways of success," Cormier said.[45] Intuitively, one may anticipate that MOOCs lend themselves well to continuing education settings and adult learning. In the legal context, MOOCs could be set up in relation to particular subjects of interest to the general population. For example, a MOOC could be created on civil procedure. This topic relating to the conduct of litigation would be of interest to various stakeholders including, litigants, students studying for legal admission, practitioners who wish to have access to current materials and the judiciary. MOOCs may be set up on emotive topics such as abortion, euthanasia or Internet privacy, which are likely to attract wide interest and diverse opinions. MOOCs may be set up as a collaborative effort by several law schools interested in creating shared resources at reduced cost. It is one matter to identify potential MOOC topics but it is quite another to understand the roles of people participating.

Several roles may develop within the MOOC ecosystem as shown in the following table.

45. Dave Cormier, Success in a MOOC, YouTube, Dec. 1, 2010, *available at* http://www.youtube.com/watch?v=r8avYQ5ZqMo.

Table 3. MOOC Ecosystem Roles

Role	Characteristics	Learning/teaching practice
Academic	Facilitator	Some academic learning resources are developed as a form of scaffolding, but most resources assembled in the MOOC ecosystem arise through contributions made by participants.
Critical friend	An experienced practitioner or disciplinary expert who wishes to share his or her skills	Teaching is guiding the participants to make the best of the information and resources contributed to the network. Teaching has parallels with practices developed for pedagogies such as problem based learning.
Moderator	A person who helps the facilitator in managing large numbers of participants	The moderator helps enforce netiquette[46] and the rule framework associated with a MOOC reflected in the end user agreement.
Student	A student seeking credit toward an accredited degree or qualification	All participants in the MOOC have access to self-assessment and course resources. However, some services provided may differ depending on the purposes of the students. Enrolled students are guided toward achieving unit learning outcomes and success in the formal assessment options.
Participant	A person not enrolled in a course for degree credit but seeking a form of credential—for example, a paralegal or member of the public seeking knowledge and a certificate of completion	Participants have access to learning resources but they are not required to participate in assessment tasks. Services may also be limited in terms of one-to-one feedback with teaching staff.
Voyeur	A person interested in seeing what is happening who does not participate or seek a credential	The digital learning resources are used but there is no participation in the online forums. Voyeurs may form online and offline networks to discuss topics but they are not part of the MOOC course learning community.

46. Netiquette means network etiquette or the social conventions that govern acceptable social interactions over networks.

MOOCs will not suit all students in much the same way that traditional lecture/seminar course designs associated with learning the law do not suit everyone. There are "literacies" and "prior knowledge" that are "privileged and rewarded within [a] MOOC environment."[47] For example:

- *The teaching model adopts a participatory and engaging pedagogy.* Learners help learners by responding and engaging with what is created, found and communicated. For current MOOC designs, learners appear to get more out of courses if they have basic digital literacies and learning is within their zone of proximal development.[48] Students need to be able to self evaluate and navigate the network of resources and people they encounter during the course.
- *It is "a process rather than product-based model of learning."*[49] Each person creates a particular mode for connection. Being able to use current digital tools well is rewarded. Support will be needed in helping lower skilled participants master the technology and the pedagogy. Having the confidence to create, distribute and engage with the comments and resources of others is also helpful. In a MOOC, anyone can take a leadership or subordinate role depending on personal needs and expectations. Students may record illustrations of their attained knowledge in an e-portfolio.[50] Students may accumulate a wide range of learning resources. They may use a range of software to collect, summarize, report and organize information resources they encounter and wish to retain.
- *MOOCs may provide varying levels of scaffolding.* At one end of the scale is an existing accredited course with defined content but with flexibility over how that content is developed. At the other end of the continuum there may be very little scaffolding compared with conventional courses. Students may need to negotiate the digital environment of the web as well as a curriculum within the network of resources, both digital and human. Some students may find this setting a little intimidating and confusing, while others will rejoice in the freedom afforded.
- *Students need the skill to contribute and create a collaborative network.* In a MOOC ecosystem the emphasis is on building a network and an associated reputation that has traditionally been the case in law schools. Students

47. McAuley, et al., *supra* note 2, at 46.

48. L.S. Vygotsky, Interaction between Learning and Development, *in* Mind in Society: The Development of Higher Psychological Processes 79 (Harvard Univ. Press 1978).

49. McAuley, et al., *supra* note 2, at 46.

50. *See* Debra Humphreys, The Questions We Need to Ask First: Setting Priorities for Higher Education in Our Technology-Rich World, *in* Game Changers: Education and Information Technologies 25, 34 (Diana G. Oblinger, ed.,Educause 2012) ("Kathleen Yancey calls the multiple curricula within higher education: the *delivered* curriculum, which is defined by the faculty and described in the syllabus; the *experienced* curriculum, which is represented by what is actually practiced by the student in the classroom; and the *lived* curriculum, which is based on the individual student's cumulative learning to date. At least potentially, e-portfolios provide insight into the curriculum as students have both *lived* and *experienced* it.").

need the ability and the opportunity to present and develop their personalities and skills online. As in any social environment, there is acceptable and unacceptable behavior—netiquette. Guidance on conduct may be found in user agreements associated with massive online games. In large scale MOOCs moderators will be essential to help enforce rules for participants.

- *Information literacy is also privileged in a MOOC environment.* Students will need to judge the value of sources and how much to trust them and use them to develop their contributions to the network. Skill in locating online resources such as journals, databases and videos will be of great value. Learners with a different command of the topic and motivation will blend their ideas, research and observations. This blend offers unprecedented opportunities for collaboration and networking but also requires maturity in evaluating information. As the volume of information and resources grows rapidly, students will need the ability to quickly scan and filter other peoples' contributions, recognizing weaknesses and bias. A personal filtering plan will be needed. It may vary according to the role and motivation associated with each participant. What one participant may value may have a different significance to another.
- *MOOCs tend to be asynchronous environments.* Students will need to share ideas and resources with people in distributed locations, nationally and internationally, crossing time (both time zones and content creation dates) and spatial boundaries. They need the knowledge and skills to communicate, negotiate with and respect people from different cultures.
- *In the MOOC "innovation is rewarded and participation needs to be performed visibly."*[51] This may present challenges to cultures with a reserved approach to open communication and may also favor some personality types over others. The role of the facilitator and moderator may prove crucial in managing unequal participation. Participation may reveal a spectrum of approaches. At one end it requires "[c]onsistently taking open, declaratory positions, cross-examining and critiquing the work of others, and, sometimes, challenging authority and received wisdom . . . ."[52] Authority comes from performance in the network. It is how people demonstrate their knowledge of the content that is valued in the MOOC learning ecosystem. At the other end of the spectrum, voyeurs will simply observe the landscape and have no other engagement. They have no authority—but that was not their purpose in entering the MOOC ecosystem in the first place. They are like window shoppers in a mall.

Some students feel more comfortable in traditional learning settings with more structured events, timing and support. Much will depend on the design of the MOOC and stakeholder motivations for involvement. Lack of external accreditation or credits for participation are likely to lessen commitment to

51. McAuley, et al., *supra* note 2, at 49.

52. *Id.* at 50.

a MOOC. As with any online environment there are social and technical skills that may limit effective participation. People who are not comfortable using Web tools may limit their participation. Communication tools, whether based on social media or otherwise, provide opportunities to offend or misunderstand. Negativity can occur in text posted in online forums and in videos and auditory commentary. If communication is not constructive and positive, people may limit their participation. Moderation policy and practice may become an important element to consider when designing a MOOC. Because MOOCs may use a range of tools requiring different levels of bandwidth, some people may not be able to view and/or use the available and/or constructed resources.[53] These concerns, however, are no different from those that arise in bricks and mortar courses.

Teaching in a MOOC-connected Environment

There is debate over whether connectivism is a learning theory[54] or is more concerned with pedagogy or curriculum. Stephen Downes defines connectivism as "the thesis that knowledge is distributed across a network of connections, and therefore that learning consists of the ability to construct and traverse those networks."[55] In this article, connectivism is considered more as a curriculum question for MOOCs. We take this stance as guidance to law academic staff considering MOOCs as an option for continuing legal education and the education of the public.

The MOOC model is consistent with adult learning principles and practices. Andragogy[56]—teaching adults—places greater emphasis on autonomous and self-directed learning; makes greater use of work-related and practical learning activities, often drawing on students' professional and life experiences; and employs more problem-based and collaborative learning than didactic instruction. Adults are more goal-oriented and often want to know the relevance of the learning experience to those goals and workplace settings. There is a greater equality between the learner and teacher. MOOCs support the development of personal goals and collaborative problem solving as people develop and sustain networks focused on a shared problem and/or task.

Practical guidance to teaching in a MOOC with tips on establishing one with Web 2.0 technologies is available on the Internet.[57] In this article, the

53. For instance, in remote communities.

54. *See* Stephen Downes, Downes on Connectivism and Connective Knowledge, Connectivism, May 21, 2012, *available at* http://www.connectivism.ca/.

55. *Id.* at 9.

56. *See* Wang ke, Farhad Balash, Zhang Yong & Baharin bin Abu, The Role of Andragogy in Support Staff Development, 13 Int'l Proceedings of Econ. Dev. and Research 154 (August 2011), *available at* http://www.ipedr.com/vol13/30-T00053.pdf.

57. *See* Ken Masters, A Brief Guide To Understanding MOOCs (Internet Science Pub. 2011) *available at* http://www.ispub.com/journal/the-internet-journal-of-medical-education/volume-

assumption is that a university learning management system will provide principle support for the MOOC. But there is no restriction on the use of other Web 2.0 technologies by participants to build and sustain their own professional and study support networks. This is consistent with Stage 4 of Ken Master's model discussed above.

In Table 3, the different roles people may adopt in a MOOC were briefly described. Some people likely will adopt multiple roles or move between roles, depending on their reason for taking the course and how they interact with other participants.

The first demand on teaching staff is to provide a presence through strategies such as welcome videos, ice-breaking activities, a short significant presentation on the problem suite, emergent themes and contributions to discussion forums. This provides a grounding that establishes the MOOC as an ecosystem populated by living entities rather than automated responses. Unlike traditional blended learning settings so common in legal education, MOOCs assume learning resources will be developed through people's contributions to the network rather than the delivery of lectures followed by tutorials. Many traditional legal educators may not like this approach. Teaching staff may provide some learning resources as a form of scaffolding but they maintain their presence through their contributions to the MOOC network.

For some legal academics who have just come to know and use Web 2.0 tools, there are even more new skills to learn and use. Cormier and Siemens identify tasks such as amplifying, curating, way finding, aggregating, filtering (or selecting), modelling and staying present as significant in this setting.[58]

There will be little one-to-one teaching in this setting. In contrast, there may be a large number of contributions distributed across a broad network. There may be some software tools to assist teachers but they will need to quickly identify important issues, resources and insightful contributions as they emerge within the network. This is not a didactic network but a heterogeneous socio-technical network where knowledge, learning and teaching are relational outcomes. Each member of the network can be a student. Each can be a teacher. Each can design his or her own assessment. Each can define personal criteria for success.

Consequently, as with problem-based learning, it is important to maintain a role as "guide on the side" rather than "sage on the stage." There may be projects needing advice, scenarios and challenges to explore and legal problems for which various solutions may be proposed, critiqued and supported. Again, the content, especially that which may reside on the central learning management

1-number-2/a-brief-guide-to-understanding-moocs.html; 9. References, MoocGuide, *available at* http://moocguide.wikispaces.com/9.+References.

58. *See* Dave Cormier & George Siemens, Through the Open Door: Open Courses as Research, Learning, and Engagement (Educause 2010), *available at* http://www.educause.edu/ero/article/through-open-door-open-courses-research-learning-and-engagement.

system becomes less important. The significant role of the teacher is to assist students in completing their projects, in working effectively and efficiently on legal problems and—not least—in learning how to construct, develop, use and evaluate a professional online network to achieve learning goals. A MOOC is open to many professionals who may have different views and make varying levels of contributions. As well, participants may be working in many different contexts. The idea is that "we learn from each other." Participants who make significant contributions could be awarded special status in much the same way as massive online games award characteristics, abilities and status to various players. Prestige and status are significant motivators in all cultures.

Moving Towards a MOOC: A Practical Example

In the scenario developed in this article, the services the university and teaching staff may offer depend on the role (or status) of the participant (as suggested in Table 3). A difficult decision for the academic teaching staff is how to involve voyeurs and participants without being overwhelmed by the sheer volume of their contributions. Here there are new skills, and likely new tools, to allow the contributions of the teaching staff to be seen by all, but actual interactions with the teacher are focused on the students paying for the award course. New roles may be needed to support MOOC participants. A critical friend whose role is to interact and facilitate participants may be created to support discussion forums. The primary teaching staff's responsibility will remain to assist paying students to be successful and achieve learning outcomes.[59] Another possibility for supporting MOOC participants is to assign an increased management role to moderators who themselves may be volunteers.

Below is a brief practical guide to setting up a MOOC using a university learning management system and online problem solving sessions. The following assumptions are made:

- The MOOC is open to any participant who wants to register for the course. There is no discrimination in terms of age, gender, ethnicity or location.
- Some participants are seeking credit for the course toward an award such as an undergraduate degree at an accredited institution.
- People with little knowledge of the law may have access to the learning resources provided in the course. Therefore, these resources must be developed to support access and participation from a wide section of the community.
- The MOOC is run over a designated time frame aligned to the offering institution's timetable.
- For students enrolled in an undergraduate law course for credit, participation in the course and assessment tasks must demonstrate that they have achieved the expected learning outcomes.

59. A similar dilemma faces teaching staff with large numbers of online students.

One possible scenario:

- In this example, we suggest using problem-based learning to stimulate discussion of the content and eventual identification of extension projects, as well as a means of covering content in ways that allow some students to achieve learning outcomes for the award curriculum. Problem-based learning helps students develop skills associated with self-directed learning, problem solving, collaboration and negotiation. The pedagogy is consistent with that of a MOOC.[60] Effective learning in this situation requires the teaching staff to be a "guide on the side."
- Since MOOCs rely on independent initiative and learning, there is a need to provide learning resources for the course at the beginning of the MOOC. This is not the same as preparing a lecture series and associated tutorial questions. MOOCs assume many of the learning resources are assembled by and within the network of participants. Nevertheless, MOOC guides will lay out basic scaffolding consisting of the problems that constitute the curriculum and rules for participants (students in particular) to use the course to achieve their learning outcomes. Therefore, we suggest creation of introductory guides[61] that include the following material for students:
  - How to register for the classes.
  - How to tag and circulate links to information around the class.
  - A schedule of online problem analysis sessions[62] and guides for retrieving recorded sessions.
  - A suite of course work problems[63] and the timetable for assessment of problems for enrolled students.
  - Suggestions for forming and participating in the learning community for the duration of the course.
  - How to develop and maintain a professional network and working together to solve problems in the course.
  - Guidance on effective online communication, the end user rules of engagement and netiquette.

60. The suggestion is that people develop a project after several weeks in the course. The problem-based approach allows a formal curriculum to be developed that supports students to achieve learning outcomes, some of which will be mapped onto the threshold learning outcomes for the discipline. Again, there is the distinction between formal learning outcomes for the award course and informal and/or emergent learning outcomes students implicitly develop as they take part in a project of interest.

61. Guides may be one or any combination of a written guide, video, interactive book, website or simulation.

62. The term was developed as part of a project involving Mr. Geoff James and the second author in an Online PBL course in Equity at Charles Darwin University.

63. While it differs from course to course, it is suggested that no more than 15 problems be used during a 12-week course.

- The MOOC will use these communication and collaboration tools:
  - A central online forum where students may post comments to the whole class. This is the formal communication venue for the course. Students would be able to receive a daily digest of contributions.
  - Self-registration into a learning support group. A discussion forum and wiki would provide tools for developing and sharing solutions to course problems. This does not preclude participants from establishing their own blogs, wikis, forums and social networking linkages, such as Facebook.
  - Voyeurs and participants may view the learning resources such as class presentations, videos, class feedback to the discussion forum and a record of the online problem-solving sessions. Voyeurs and participants may not contribute to the discussion forum but they may circulate tags to other discussion forums, blogs and networks. Participants in those other networks may then decide to engage in the MOOC. Word of mouth via social media is a powerful tool for attracting attention.

One challenge for this learning community will be to assemble, examine, select and use the available contributions to help achieve individual goals. In this example, a discussion forum or blog is used to assemble and notify students of contributions. It is acting as a class aggregator although students may elect to set up their own newsreader.[64]

Moving Towards MOOC Models of Legal Online Education

The development of a MOOC designed for public, continuing and awarded legal education would provide many opportunities and challenges including the establishment of a continuing legal education site (similar to http://edfutures.com/) designed to support the law community and the development of professional networks in Australia and overseas. One challenge would be to engage people from different universities to contribute learning resources that adhere to a universally agreed design. It would also challenge university intellectual property policies, which mandate that everything an employed academic produces is owned by his or her institution. Such policies seem outdated in the face of the public utility in reducing expenditure by producing shared high quality resources. The increasing use of open source creative commons materials would place considerable pressure on those who attempt to lock up knowledge—both universities and other interested parties such as publishers. More can be achieved by universities creating high quality resources, which they then share, avoiding duplication and wasted expenditure.

64. *See generally* Stephen Downes, gRSShopper 0.1, gRSShopper, *available at* http://grsshopper.downes.ca/description.htm (discussing the gRSShopper application and its uses); What Is RSS? RSS Explained, What is RSS?, *available at* http://www.whatisrss.com/ (listing popular RSS feeds).

Such a site could be contributed to and maintained through an alliance of universities, law societies and bar associations, perhaps under the auspices of national and international bodies. Universities, for the most part, do not have open registration systems for their offerings, even for continuing education. As mentioned earlier, there would be an opportunity to provide students with multiple modalities in the way they study. At present, students are classified as on campus, off campus, engaged in classroom, online or blended approaches being a combination of the two.

Universities are not accustomed to tailoring curriculum to students. This is not to say considerable effort is not put into supporting student success in existing award courses. However, the need for personalized and custom learning may lead to a more competency-based design of courses, programs and degrees. If university staff could share learning resources and move away from a preoccupation with "content" toward a greater focus on problem solving with students, then a MOOC could provide a rich learning setting for both teacher and student.

A range of information systems can be designed to assist teaching and learning in this environment. Systems could include, but not be limited to a vision of '"actionable intelligence"[65] where data and tools reduce the risk of student failure and give students maximum odds for success. Such tools may be used to:

- Profile and classify the different people registered in the MOOC.
- Support students through the use of digital tutors/assistants.
- Automate assessment strategies for formative feedback for students and summative assessment for people not seeking credit for the course.
- Provide diagnostic dashboards[66] to track progress, attrition and student engagement.

Student profiles could personalize the learning experience and be designed to assist student success in practical ways irrespective of whether the student is simply interested in the topic, seeking to develop a professional network surrounding the topic or is seeking credit under a formal program. Student profiles may seek to place students in categories based on their intentions, aspirations in relation to the course, learning goals and outcomes, learning styles and educational background. There also likely will be opportunities to profile participants by identifying the way students use MOOC resources, assembling a personal learning portfolio, identifying and communicating with the learning community during the course and, finally, by examining the reasons some students may not believe they have been successful.

65. *See* Lindar Bear & John Campbell, From Metrics to Analytics, Reporting to Action: Analytics' Role in the Changing Learning Environment, *in* Game Changers: Education and Information Technologies 53, 59 (Diana G. Oblinger, ed., Educause 2012).

66. Diagnostic dashboards are a set of graphs, charts and other information aggregated from raw data by a computer program. The summary information thus provided is designed to assist decision makers.

In some courses, it might be useful to profile the demographic background of the students and modify course work on the basis of the cultural diversity of the class. It might also be useful to identify aspects of people's experience, educational background and existing skills in relation to the course. Students may not need all available resources but they may need specific resources tailored to their current abilities. Identifying subgroups in the class based on student interests, desired learning outcomes and motivation for participating in the course also might be helpful. Teachers might want to identify characteristics of students who complete and who do not complete the course, including reasons for attrition, aspects of the course that are lacking or are in need of improvement and suggestions for future directions the course may explore.

Digital tutors/assistants tailored to students may include systems to help people identify, collate and use the contributions of others in the class. The formal resources provided via the learning management system are relatively simple to organize, although the number of contributions may increase significantly and a regular digest is likely to be required. However, in this setting students may benefit from digital tutors that assist students to:

- Record and update their purpose for taking courses.
- Pursue the landscape of contributions and tags and identify contributions relevant to their goals.
- Link to relevant legal databases based on an analysis of the text of their contributions.
- Provide a visual representation of connections established by their contributions to their learning community and the class as a whole.[67]
- Support practical writing to achieve the literacy required for legal practice.
- Identify particular contributors to follow in much the same way that people become Facebook or Twitter followers.

Moving beyond online tests and feedback associated with student responses to multiple choice and short answer questions, there are several possibilities for automated assessment for individual students including:

- A suite of online tests that examine some fundamentals of the content.
- Example solutions to course legal problems. Both poor and sound solutions are available to students.
- Online literacy tests and resources designed to assist students to acquire baseline standards in the use of IRAC, basic writing skills, basic information management skills associated with interrogating legal databases, and basic skills required to use software tools and course environments.

All those involved with a MOOC need to adhere to standards of citation including, acknowledgement and attribution of others' work. Allegations of

67. Something like the visual thesaurus does now but these connections may be identified through an analysis of their tagging of items and/or text of the contributions.

plagiarism need to be avoided in a shared community of scholars, yet people should be free to share ideas in collaboration with one another.[68] The greater use of online assessment in university courses with learning management systems has stimulated a rethinking of student assessment practices. Some universities now use more authentic and personal assessment practices designed to reduce plagiarism and to give students more meaningful and professionally relevant assessment tasks. The movement to MOOCs will challenge us to reflect on how assessment tasks are used to stimulate learning in a community of people who may simply want to learn more than they want to obtain a credential or award.[69] In addition, MOOCs are likely to encourage a review of the way we assess students which encourages assessment more aligned with professional legal practice. The opportunity for plagiarism will always exist. However our use of online technology will disrupt existing assessment practices that are grounded in an assumption that the only worthwhile assessment of students occurs through carefully monitored exams where all students sit in the same room at the same time or assessments that require students to work in isolation from one another.

Conclusion

It will not be an easy transition to a post-industrial digital economy where information about the law is readily available free of charge to all who care to look. The reputation of law schools will not rely on the mere packaging and repackaging of content delivered in lecture and seminar format but rather on the reputation and branding of the school arising from academic teaching and staff interactions with students and other participants who engage with them in a scholarly community interested in learning about the law. The steps described above provide some insights, which may advance law schools toward more open and participatory professional learning and teaching models. In the short term, such steps may allow legal education to explore the possibilities unhindered by an industrial age perspective of legal education. Law schools will no longer be alone in the legal education market. Individuals. firms, and publishers will also be jockeying for market position. In this respect it is important to note that the most successful MOOCs have spawned new entities and delivery methods which may further enhance competition in the legal education market.

68. *See* Charis Palmer, ANU vice-chancellor issues MOOCs warning, The Conversation, Sept. 28, 2012, *available at* http://theconversation.edu.au/anu-vice-chancellor-issues-moocs-warning-9881; Beverley Oliver, Credentials in the cloud: how will MOOCs deal with plagiarism?, The Conversation, Sept. 10, 2012, *available at* http://theconversation.edu.au/credentials-in-the-cloud-how-will-moocs-deal-with-plagiarism-8581 (discussing concern about plagiarism in MOOCs).

69. Although this initial experience may stimulate an interest in pursuing a credential or an award in the discipline or field of study.